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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/549,448

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Rodolfo Noto

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EXAMINER

KNABLE, GEOFFREY L

ART UNIT

PAPER NUMBER

1791

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/549,448

Applicant(s)

NOTO ET AL.

Examiner

Geoffrey L. Knable

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-58 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 29-58 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/55/08)
Paper No(s)/Mail Date 9/14/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

1. The disclosure is objected to because of the following informalities:

At page 22, lines 15-35 of the specification, the references to "12" and "13" are reversed relative to the figures 7-8.

Appropriate correction is required.

2. Claims 33, 37 and 47 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 33 defines that the fraction of the elongated elements (i.e. those turned up) is turned up around the first and second bead cores. The original disclosure (esp. page 21, lines 15-33 and fig. 12) however only discloses turning up the elongated elements around both the first and second bead cores in the context of an embodiment in which all the elongated elements are turned about one or the other bead core, and thus not an embodiment in which only a "fraction" is turned up as required by claim 29. This is therefore subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is new matter. In other words, assuming that claim 29 is to be read as requiring that only a fraction is turned up around a bead, then descriptive support is lacking for claim 33 where this fraction is turned up around the two bead cores. An analogous lack of description/new matter issue is present in claim 47.

Claim 37 defines that "at least two" of the turned up ends lie in different planes. The original disclosure does not however describe that only "at least two" of these ends lie in different planes. This therefore is subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is new matter.

3. Claims 29-58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

At four lines from the end of claim 29, it is defined that "a fraction" of the elongated elements are turned up. The scope of this requirement is however arguably ambiguous as it is not clear for example if this requires that this fraction is other than "1/1" and/or that this requires that "only" this fraction is turned up. If this "fraction" were "1/1" or not excluding the other fractions also being turned up, this claim would then read on any tire in which all the elements are turned up, as of course typical for many/most tires. Along similar lines, it is not clear if this "fraction" is in reference to the elongated elements that make up a single ply/layer or could be read as relative to all the elements that make up all the plies in tire (in which case, a tire with one carcass layer ending at the bead and another layer being turned up, would read on this). As it seems from a complete reading of applicant's disclosure that the intent is that only a fraction (the fraction being less than 1/1) is turned up (this being a fraction within a single ply/layer), the claims will be so read for purposes of the prior art rejections to follow but

clarification is required to avoid an ambiguity on this key feature of the claims.

Analogous ambiguities are present in claim 42.

At four lines from the end of claim 42, it is not clear if the "fraction" referred to is the same as the "fraction" referred to in line 6 - if so (as assumed), it should be reflected in the claims by e.g. "the" or "said".

In claim 56, the reference to "necking-down" is arguably ambiguous, it being clearer if the function of this step (in terms of cross-sectional profile/cord density) were defined.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 29, 36, 38, 42 and 58 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Weissert et al. (US 2004/0154727).

Weissert et al. discloses a tire including a carcass including a plurality of elongated elements disposed in U-shaped conformation defining side portions and a crown portion as well as turnups around bead cores (e.g. paragraph [0009]). A tread and sidewall are implicit. As to turning up a "fraction" of the elongated elements, in view of figs. 17-21, turning up only a fraction of the U-shaped elongated elements is taught or would have been obvious. In particular, as clearly depicted, looped ends of the carcass turns are at different radial diameters, this being described as providing the advantage that fewer ends 12A are located at what is described as "the bead attachment area 22" (e.g. paragraph [0060]). Further, as already noted, paragraph [0009] indicates that the carcass is turned up around bead cores. In view of this disclosure, turning up only a fraction of the elongated elements as claimed is taught or certainly obvious following the

guidance provided by this disclosure. It is noted that although the cords in this reference are continuous, such is explicitly included within the scope of the present claims - note page 24, lines 16+ of the specification. A tire as claimed in claim 29 is therefore anticipated or obvious from this disclosure. As to claim 36, as clear from figs. 17-21, 50% or fewer of the elongated elements extend to the bead area and would be turned up. As to claims 36 and 58, Weissert et al. suggests that beads are inclusive of elements including chafers (e.g. paragraph [0018] as well as [0003]), such layers typically reinforcing the rim area which would be axially outward of bead cores. A reinforcing edge consistent with the claims is therefore suggested or certainly obvious in view of such conventional chafers. As to claim 42, Weissert et al. discloses disposing the elongated elements on a toroidal support (52) in the U-shaped conformation where a fraction of the elongated elements extend further radially inward than other portions (figs. 17-21). Inclusion of a bead core and turn-up around the bead core is suggested as noted in paragraph [0009]. To allow turn-up, the artisan would have understood that the fraction would or certainly should extend further inward than the bead core. To turn up ends of only this fraction would have been suggested or obvious for the same reasons noted with respect to claim 29. A method as required by claim 42 is therefore anticipated or obvious from Weissert et al.

8. Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weissert et al. (US 2004/0154727).

Although Weissert et al. does not detail the bead core, as well known, typical and obvious, bead cores are formed of plural axially and radially superposed coils.

9. Claims 30-32, 34, 43-46 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weissert et al. (US 2004/0154727) as applied above, and further in view of Ogawa (US 6,929,045).

As to claims 30-32, 43, 45 and 46, Weissert et al. does not detail the bead construction. Ogawa is directed to desirable bead constructions for use with continuous cord based carcass plies, this reference teaching providing inner and outer bead cores with the turn-up around either to provide effective carcass anchorage in the beads (e.g. note the figs.). To provide inner and outer beads with the turnup around one or the other would therefore have been an obvious turn-up configuration to enhance carcass anchorage, only the expected and predictable results being achieved. As to claim 34, the particular bead dimensions would have been readily and routinely selected by the artisan based on the type and size of tire contemplated - only the expected and predictable results following any given selection. As to claim 44, note the previous comments with respect to claims 36 and 58. As to claim 57, Ogawa suggests the bead cores desirably include axial/radial coils.

10. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weissert et al. (US 2004/0154727) as applied to claim 29 above, and further in view of JP 07-195915.

To stagger turn-up ends in different planes would have been obvious in view of JP '915 which suggests such an expedient to improve bead durability.

11. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weissert et al. (US 2004/0154727) in view of Ogawa (US 6,929,045) as applied to claim 43 above, and further in view of JP 07-195915.

To stagger turn-up ends in different planes using a filler would have been obvious in view of JP '915 which suggests such an expedient to improve bead durability (note esp. filler "22" in fig. 4 of JP '915).

12. Claims 29, 36, 39-42, 50-53, 56 and 57 are rejected under 35 U.S.C. 102(b) as being anticipated by Christman (US 4,248,287).

Christman discloses a tire including a carcass, tread, sidewalls and beads where the carcass includes elongated elements in U-shaped conformation with side portions joined by a crown portions (e.g. fig. 9) where a fraction of the elongated elements are turned up around the bead cores (note esp. col. 6, lines 7-14 and figs. 11-12). A tire as required by claim 29 is therefore anticipated by Christman. As to method claim 42, Christman also builds the carcass on a toroidal mandrel and turns up the fraction that extends beyond the bead around the bead and thus the method is likewise anticipated. As to claim 36, the fraction is 1/3. As to claims 39-41 and 50-53, the elongated elements are in the form of strips that are inclusive of two different lengths and therefore inclusive of parts of the same length and parts of different lengths. As to claim 56, the cutting of the outer thirds necks down the strips. As to claim 57, plural coils are suggested (esp. col. 5, lines 59+).

13. Claims 29-31, 35, 38, 42-45, 49 and 58 are rejected under 35 U.S.C. 102(a) as being anticipated by WO 02/094584 to Auxerre.

Auxerre (equivalent US 2004/0154720 will be used as effectively a translation of this reference, all future references to paragraphs being to this US publication) discloses a tire including a carcass, tread, sidewalls and beads where the carcass includes elongated elements in U-shaped conformation with side portions joined by a crown portion. As to a fraction of the elongated elements being turned up around the bead cores, Auxerre suggests (esp. paragraphs [0013] and [0050]) that the carcass parts "11" can be essentially part of the carcass ply "10" disposed in alternating fashion. Further, parts "10" of the ply can be turned up around a bead core while the other parts are not turned up (fig. 2). In such case, only a fraction would be turned up around the bead as claimed. A tire as required by claim 29 is therefore anticipated by Auxerre. As to method claim 42, Auxerre also builds the carcass on a toroidal support (paragraph [0035]) and would turn up the fraction that extends beyond the bead around the bead to yield the fig. 2 bead engagement and thus the method is likewise anticipated. As to claims 30-31, 43 and 45, internal and external beads 80 and 31 are shown. As to claims 35 and 49, the external part of "31" defines a third core. As to claims 38, 44 and 58, note reinforced rim protector 70.

14. Claims 36, 39-41 and 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/094584 to Auxerre as applied above, and further in view of Caretta (US 6,457,504).

As already noted, Auxerre suggests (esp. paragraphs [0013] and [0050]) that the carcass parts "11" can be essentially part of the carcass ply "10", the two alternating parts being of limited circumferential extent. This would seem to imply that strip

elements are provided but there is insufficient detail to conclude this. In view of Caretta, which is also directed to forming a carcass having parts that separate at some point in the sidewall, and suggests that this structure is desirably formed by cutting and applying strips side by side to a toroidal support. In view of this teaching, to form the Auxerre carcass embodiment as described in paragraphs [0013] and [0050] using strip elements would have been obvious. Further, the Auxerre structure would have been understood to require different length strips in view of the different heights of the two bead areas. These would have further been symmetrically positioned to form a symmetrical tire. Further, also, every other strip would be of the same length - the claims require nothing more than this.

15. Claims 37 and 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/094584 to Auxerre as applied above, and further in view of JP 07-195915.

To stagger turn-up ends in different planes using a filler would have been obvious in view of JP '915 which suggests such an expedient to improve bead durability (note esp. filler "22" in fig. 4 of JP '915).

16. Claims 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/094584 to Auxerre in view of Caretta (US 6,457,504) as applied above, and further in view of Weissert et al. (US 2004/0154727) and Noto et al. (US 2005/0076988).

Auxerre would require staggered strip lengths at the ends to achieve the different bead heights. To achieve this configuration using the same length but asymmetrically applied strips would have been obvious in view of Weissert (fig. 18) and Noto et al.

(esp. figs. 5-6) which suggest an understanding that a staggered ply end can be achieved by alternating asymmetrically applied equal length strips. Including an additional shorter ply would likewise have been obvious in view of Weissert et al. (figs. 19-20) depending upon the desired amount of longer parts, and thus bead anchorage, desired.

17. Claims 29, 36, 38, 39, 42, 50, 57 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/26043 to Caretta taken in view of Weissert et al. (US 2004/0154727) and Christman (US 4,248,287).

WO '043 discloses a tire including a carcass, beads, tread and sidewall where the carcass includes elongated strip elements in U-shaped conformation and turned up around the beads. As to turning up a fraction of the elements, Christman similarly forms a tire carcass by applying radial strips and further suggests that desirably, only a fraction of the elongated elements are turned up around the bead cores (note esp. col. 6, lines 7-14 and figs. 11-12). Weissert et al., as detailed earlier in this office action, likewise discloses forming the carcass where only part of the carcass ply is turned up around the beads, this being described as providing the advantage that fewer ends 12A are located at what is described as "the bead attachment area 22" (e.g. paragraph [0060]). In view of these teachings, it would have been obvious to only turn up a fraction of the strips leaving the remainder not turned up around the bead. A tire as claimed would therefore have been obvious. As to the method, WO '043 teaches applying the strips to a toroidal core with the parts to be turned up extending further inward and as such, the claimed method would have likewise been obvious.

18. Claims 40, 41 and 51-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/26043 to Caretta taken in view of Weissert et al. (US 2004/0154727) and Christman (US 4,248,287) as applied above, and further in view of Noto et al. (US 2005/0076988).

To achieve different length strip ends would have been understood to require either different length strips or the same length strips alternately applied - note also for example Noto et al. which discloses either expedient to form a staggered edge ply. Note also that Weissert et al. which likewise suggests an understanding that a staggered ply end can be achieved by alternating asymmetrically applied equal length strips. Including an additional shorter ply would likewise have been obvious in view of Weissert et al. (figs. 19-20) depending upon the desired amount of longer parts and bead anchorage desired.

19. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/26043 to Caretta taken in view of Weissert et al. (US 2004/0154727) and Christman (US 4,248,287) as applied above, and further in view of JP 07-195915.

To stagger turn-up ends in different planes would have been obvious in view of JP '915 which suggests such an expedient to improve bead durability.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Geoffrey L. Knable/
Primary Examiner, Art Unit 1791

G. Knable
March 29, 2009